

## **Remarks**

### **Objection to the Specification**

In response to the objection to the paragraph bridging pages 4 and 5 of the specification that makes reference to the claims as opposed to incorporating written descriptive material, said paragraph has been amended herein, without the addition of new matter, to replace the references to various claims with the language contained in said claims. Applicant respectfully submits that this amendment addresses the objection and requests reconsideration and withdrawal thereof.

### **Rejection of Claims under 35 U.S.C. §112, second paragraph**

Claims 1-18 were rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

More specifically, the Action states that it is not clear what is meant by HV<sub>0.2</sub>. The Examiner is correct in interpreting HV to pertain to Vickers Hardness. The subscript 0.2 refers to Vickers Hardness that has been measured during exposure to a strain of 200g in a particular test, but the resulting measurement units are identical to HV. Such testing is commonly known in the art.

The Action also states that it was unclear in claim 1 whether the hardness is a property of the hard material or the surface coated hard material. Claim 1 has been amended in response to this rejection.

Claim 3 has been amended, in accordance with the Examiner's suggestion, to remove the confusing "is the basis of" phrase.

Claims 6-7 have been canceled, and the limitations therein added to claim 5 per the Examiner's suggestion.

Claims 13-14 have been canceled, and the limitations therein added to claim 12 to address the rejection basis that only a mixing step was recited in the previous version of claim 12. The terminology "solution or emulsion" is used in claim 12 and adequately describes the liquid vehicle for delivery of the polysiloxane to the hard material grain. Applicant is amenable to discussing this with the Examiner if so desired.

Claim 15 has been amended to correct the typographical error pointed out in the Action. Applicant thanks the Examiner for noting this error.

Rejections of the Claims Based on Cited References

Claims 1-18 are pending in the application. The above cited action rejects:

- (a) claims 1-8, 12 and 16-18 under 35 U.S.C. §102(b) as anticipated by, or, in the alternative, under 35 U.S.C. §103(a) as obvious over Saam;
- (b) claims 1-3, 5-12, 14, 15, 17 and 18 as anticipated by, or, in the alternative, obvious over Swei;
- (c) claims 1-18 under 35 U.S.C. §112, second paragraph, as indefinite based on the meaning of  $HV_{0.2}$ ;
- (d) claim 1 as anticipated by, or, in the alternative, obvious over Chen; and
- (e) claims 1-3 as anticipated by, or, in the alternative, obvious over Neal.

Responsive to such grounds of rejection, Applicant respectfully submits the following points for the Examiner's consideration.

US 4,244,849 (Saam) refers to the production of an elastomer of an aqueous silicone emulsion that consists of a continuous water phase and an anionic stabilized, dispersed silicone phase that does not contain any colloidal silicon oxide. The silicone phase does comprise a plug-copolymer of a water soluble silicate and a polidiorganosiloxane with a hydroxyl end group (col. 2, line 61 - col. 3, line 12.)

Saam is directed to creating elastomeric layers. The presently claimed invention, however, as recited in now amended Claim 1 recites a surface coated hard material comprised of single hard grids which are coated by a polysiloxane layer, whereas this polysiloxane layer may be produced by mixing the hard grids with a polysiloxane emulsion. After such treatment, there are still single hard material grids on the surface of which is a thin polysiloxane layer. The polysiloxane itself remains unaltered. There has not been any chemical reaction and no copolymer nor any elastomer has been produced. The polysiloxane of the presently claimed invention does not, as opposed to that used in Saam, have any functional groups.

The fillers described by Saam, *et al.*, serve to vary the characteristics of the elastomer produced. The aim still is an elastomer which preferably is used for layers and which additionally contain fillers. These, however, are not coated single hard material grids, but the fillers are part of the layer (of the elastomer) itself and form its characteristics.

As a means for preventing wear in transparent layers, such elastomers would be most unsuitable.

US 5,182,173 (Swei) teaches a filler consisting of an inorganic core and a layer of a network silicone elastomer that covers the inorganic core and that is chemically bound to the core (col. 1, lines 30-33.) The goal is to produce, by means of these covered fillers, a thermoplastic polymer matrix of a composite material the tenaciousness of which is improved.

For this purpose, a mono-functional polysiloxane with an end portion functional group is transposed with a multifunctional silane in order to produce multifunctional end portion polysiloxane that, during the process of coating, is increasingly netted to an elastomer and bound to the inorganic core (col. 1, lines 39-49.)

With respect to the hard material layer of the presently claimed invention, however, a polysiloxane without any functional group is simply applied to the surface and then dried. Again, no chemical reaction or any polymerization occurs, nor is the polysiloxane chemically bound to the hard material. The presently claimed invention, rather, applies only a slight polysiloxane layer to the surface in order to - due to the excellent creeping qualities of polysiloxanes - adjust micro edges, fissures, creases, and step-like shiftings of the hard grid so that low-viscous liquids may not infiltrate into the grid and so that no diffuse light dispersion will occur at edges and creases.

A hard material grid thus treated is excellently suitable for preventing transparent layer wearout. The Swei filler, however, which shows a rubber-like shroud that is rigidly bound to the surface, may obviously not be used for such purposes.

US 5,991,591 (Chen) describes a circonia ceramic roller for copiers, that is covered with a polysiloxane layer as a measure of prevention. Used for this purpose are polysiloxanes with functional groups (col. 11, ll. 23-55.) The presently claimed invention differs in that it requires not forming moulds, but hard material grids.

US 6,510,777 (Neal) refers to the production of armour plates for vehicles, reaction containers, planes, and buildings. Neal teaches inserting ceramic disks (col. 2, ll. 25-35) by means of an adhesive in between several fiber layers (col. 1, ll. 50-55; col. 4, ll. 62-63.) The fiber layers may well comprise, on their outer surface an inert elastomer layer (col. 1, ll. 53-55) with the elastomer possibly being a polymer on the basis of polysiloxane (col. 4, ll. 45-56.) But in this case the polysiloxane does not even contact the ceramic (i.e., hard material.) Therefore, the armour plates referred to do not have anything in common with the coated hard material recited in the claims, as amended.

None of the cited references, either alone or in combination, teach or suggest the presently claimed invention recited in claims 1-18, as amended. Thus, and in consideration of the


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removal of all other grounds for claim rejections and specification objections, it is therefore submitted that claims 1-18 are allowable and notice thereof is requested.

If any questions remain, please call Applicant's attorney, collect, at the number given above. If any sums are owed due to claim adjustments, please debit or credit Deposit Account 03-2410, order 12707-1.

Respectfully submitted,  
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